World's Largest Known Prime Number

Euclid proved in the 3rd century BC that there are an infinite number of prime numbers. A prime number can be divided only by itself and the number 1. Primes serve as the building blocks for all positive integers, and have applications in cryptography and other fields.

Mersenne numbers are numbers that are one less than a power of two (2n – 1). A Mersenne number that is also a prime number is called a Mersenne prime. These can be found and verified relatively quickly. Before 1952, 12 Mersenne primes were known; with the aid of computers, 30 more have been found. The eight largest have all been found by the [Great Internet Mersenne Prime Search](http://www.mersenne.org/) (GIMPS), a distributed network of volunteers using their spare computer power to find the largest Mersenne primes.

The largest currently known prime, 257,885,161– 1, was found by Curtis Cooper, a professor at the University of Central Missouri, on January 25, 2013. It has 17,425,176 digits.

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